



Atty Dkt No. 1950-0021  
PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re Application of:

Robert H. GRUBBS et al.

Confirmation No.:

Serial No.: 10/632,528

Group Art Unit: 1621

Filing Date: March 28, 2003

Examiner: Unassigned

Title: SYNTHESIS OF MACROCYCLIC POLYMERS BY RING INSERTION  
POLYMERIZATION OF CYCLIC OLEFIN MONOMERS

**INFORMATION DISCLOSURE STATEMENT**

Mail Stop Amendment.  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

This is an Information Disclosure Statement submitted for the Examiner's consideration. Applicants respectfully request that the Examiner review and make of record the references identified below.

A PTO-1449 form listing the references accompanies this paper. Applicants would appreciate the Examiner's initialing and returning the form to indicate that the references have been reviewed and made of record. Copies of the nonpatent references are also included. The references are as follows:

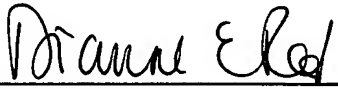
| U.S. PATENT DOCUMENTS |                                |                               |
|-----------------------|--------------------------------|-------------------------------|
| Document No.          | Issue Date or Publication Date | Name of Patentee or Applicant |
| 5,312,940             | 5/17/94                        | Grubbs et al.                 |
| 5,342,909             | 8/30/94                        | Grubbs et al.                 |
| 5,831,108             | 11/3/98                        | Grubbs et al.                 |
| 5,969,170             | 10/19/99                       | Grubbs et al.                 |
| 6,080,826             | 6/27/00                        | Grubbs et al.                 |
| 6,111,121             | 8/29/00                        | Grubbs et al.                 |
| 6,211,391             | 4/3/01                         | Grubbs et al.                 |
| 6,310,121             | 10/30/01                       | Woodson, Jr. et al.           |
| 6,506,860             | 1/14/03                        | Bansleben et al.              |
| 6,610,626             | 8/26/03                        | Grubbs et al.                 |

| NONPATENT DOCUMENTS  |  |
|--|--|
| BIELAWSKI et al. (2000), "Highly Efficient Ring-Opening Metathesis Polymerization (ROMP) Using New Ruthenium Catalysts Containing N-Heterocyclic Carbene Ligands," <i>Angew. Chem. Int. Ed.</i> <u>39</u> (16):2903-2906.            |  |
| BOURISSOU et al. (2000), "Stable Carbenes," <i>Chem. Rev.</i> <u>100</u> (1):39-91.  |  |
| CHATTERJEE et al. (2000), "Synthesis of Functionalized Olefins by Cross and Ring-Closing Metatheses," <i>J. Am. Chem. Soc.</i> <u>122</u> (15):3783-3784.  |  |
| HÖCKER et al. (1977), "The Thermal Behavior of Cycloalkanes," <i>Makromol. Chem.</i> <u>178</u> :3101-3108.  |  |
| HUANG et al. (1999), "Olefin Metathesis-Active Ruthenium Complexes Bearing a Nucleophilic Carbene Ligand," <i>J. Am. Chem. Soc.</i> <u>121</u> (12):2674-2678.   |  |
| LEE et al. (2002), "Retention Behavior of Linear and Ring Polystyrene at the Chromatographic Critical Condition," <i>Macromolecules</i> <u>35</u> :529-538.  |  |
| SHEA et al. (1998), "A New Strategy for the Synthesis of Macrocycles. The Polyhomologation of Boracyclanes," <i>J. Org. Chem.</i> <u>63</u> (17):5746.   |  |
| SCHOLL et al. (1999), "Increased Ring Closing Metathesis Activity of Ruthenium-Based Olefin Metathesis Catalysts Coordinated with Imidazolin-2-ylidene Ligands," <i>Tetrahedron Letters</i> <u>40</u> :2247-2250.                    |  |
| SCHOLL et al. (1999), "Synthesis and Activity of a New Generation of Ruthenium-Based Olefin Metathesis Catalysts Coordinated with 1,3-Dimesityl-4,5-dihydroimidazol-2-ylidene Ligands," <i>Organic Letters</i> <u>1</u> (6):953-956. |  |
| TRNKA et al. (2001), "The Development of L <sub>2</sub> X <sub>2</sub> Ru=CHR Olefin Metathesis Catalysts: An Organometallic Success Story," <i>Accounts of Chemical Research</i> <u>34</u> (1):18-29.                               |  |

This Information Disclosure Statement is not intended as a representation that a search has been made, that additional information material to the examination of this application does not exist, or that any of the above references constitutes prior art to the present application within the meaning of 35 USC § 102.

As applicants have not yet received a first Action on the merits, no fee is required for filing this Information Disclosure Statement. If, however, the PTO finds that for some reason a fee is found to be necessary, our Deposit Account No. 18-0580 may be charged therefor.

Respectfully submitted,

By:   
Dianne E. Reed  
Registration No. 31,292

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Substitute for form 1449A/PTO

# INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet 1 of 1

## Complete if Known

|                        |                         |
|------------------------|-------------------------|
| Application Number     | 10/632,528              |
| Filing Date            | August 1, 2003          |
| First Named Inventor   | Robert H. GRUBBS et al. |
| Art Unit               | 1621                    |
| Examiner Name          | Unassigned              |
| Attorney Docket Number | 1950-0021               |

## U.S. PATENT DOCUMENTS

| Examiner Initials* | Cite No. | Document No. | Issue Date or Publication Date | Name of Patentee or Applicant of Cited Document | Class | Subclass | Filing Date if Appropriate |
|--------------------|----------|--------------|--------------------------------|---|-------|----------|----------------------------|
|                    | AA       | 5,312,940    | 5/17/94                        | Grubbs et al.                                   |       |          |                            |
|                    | AB       | 5,342,909    | 8/30/94                        | Grubbs et al.                                   |       |          |                            |
|                    | AC       | 5,831,108    | 11/3/98                        | Grubbs et al.                                   |       |          |                            |
|                    | AD       | 5,969,170    | 10/19/99                       | Grubbs et al.                                   |       |          |                            |
|                    | AE       | 6,080,826    | 6/27/00                        | Grubbs et al.                                   |       |          |                            |
|                    | AF       | 6,111,121    | 8/29/00                        | Grubbs et al.                                   |       |          |                            |
|                    | AG       | 6,211,391    | 4/3/01                         | Grubbs et al.                                   |       |          |                            |
|                    | AH       | 6,310,121    | 10/30/01                       | Woodson, Jr. et al.                             |       |          |                            |
|                    | AI       | 6,506,860    | 1/14/03                        | Bansleben et al.                                |       |          |                            |
|                    | AJ       | 6,610,626    | 8/26/03                        | Grubbs et al.                                   |       |          |                            |

## OTHER DOCUMENTS — NONPATENT LITERATURE DOCUMENTS

| Examiner Initials* | Cite No. | Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), Title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published. | T |
|--------------------|----------|---|---|
|                    | AK       | BIELAWSKI et al. (2000), "Highly Efficient Ring-Opening Metathesis Polymerization (ROMP) Using New Ruthenium Catalysts Containing N-Heterocyclic Carbene Ligands," <i>Angew. Chem. Int. Ed.</i> 39(16):2903-2906.   |   |
|                    | AL       | BOURISSOU et al. (2000), "Stable Carbenes," <i>Chem. Rev.</i> 100(1):39-91.   |   |
|                    | AM       | CHATTERJEE et al. (2000), "Synthesis of Functionalized Olefins by Cross and Ring-Closing Metatheses," <i>J. Am. Chem. Soc.</i> 122(15):3783-3784.   |   |
|                    | AN       | HÖCKER et al. (1977), "The Thermal Behavior of Cycloalkanes," <i>Makromol. Chem.</i> 178:3101-3108.   |   |
|                    | AO       | HUANG et al. (1999), "Olefin Metathesis-Active Ruthenium Complexes Bearing a Nucleophilic Carbene Ligand," <i>J. Am. Chem. Soc.</i> 121(12):2674-2678.  |   |
|                    | AP       | LEE et al. (2002), "Retention Behavior of Linear and Ring Polystyrene at the Chromatographic Critical Condition," <i>Macromolecules</i> 35:529-538.   |   |
|                    | AQ       | SHEA et al. (1998), "A New Strategy for the Synthesis of Macrocycles. The Polyhomologation of Boracyclanes," <i>J. Org. Chem.</i> 63(17):5746.  |   |
|                    | AR       | SCHOLL et al. (1999), "Increased Ring Closing Metathesis Activity of Ruthenium-Based Olefin Metathesis Catalysts Coordinated with Imidazolin-2-ylidene Ligands," <i>Tetrahedron Letters</i> 40:2247-2250.   |   |
|                    | AS       | SCHOLL et al. (1999), "Synthesis and Activity of a New Generation of Ruthenium-Based Olefin Metathesis Catalysts Coordinated with 1,3-Dimesityl-4,5-dihydroimidazol-2-ylidene Ligands," <i>Organic Letters</i> 1(6):953-956.                                    |   |
|                    | AT       | TRNKA et al. (2001), "The Development of L <sub>2</sub> X <sub>2</sub> Ru=CHR Olefin Metathesis Catalysts: An Organometallic Success Story," <i>Accounts of Chemical Research</i> 34(1):18-29.  |   |

Examiner  
SignatureDate  
Considered

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.



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|   |                        |                         |
|---|------------------------|-------------------------|
| <b>TRANSMITTAL FORM</b><br><br>(to be used for all correspondence after initial filing) | Application Number     | 10/632,528              |
|   | Filing Date            | August 1, 2003          |
|   | First Named Inventor   | Robert H. GRUBBS et al. |
|   | Art Unit               | 1621                    |
|   | Examiner Name          | Unassigned              |
|   | Attorney Docket Number | 1950-0021               |
| Mail Stop   |                        |                         |

| ENCLOSURES (Check all that apply)  |  |  |
|--|--|--|
| <input type="checkbox"/> No fee due<br><input type="checkbox"/> Fee Transmittal<br><input type="checkbox"/> Fee(s) due<br><input type="checkbox"/> Fee Transmittal<br><input type="checkbox"/> Check for \$*<br><input checked="" type="checkbox"/> Charge any underpayment or credit any overpayment to Deposit Account No. 18-0580<br><input checked="" type="checkbox"/> Return postcard<br><input type="checkbox"/> Amendment/Reply<br><input type="checkbox"/> After Final<br><input type="checkbox"/> Affidavits/declaration(s)<br><input type="checkbox"/> Express Abandonment Request<br><input checked="" type="checkbox"/> Information Disclosure Statement & Form(s) PTO-1449<br><input checked="" type="checkbox"/> Copies of cited reference<br><input type="checkbox"/> Certified Copy of Priority Document(s) | <input type="checkbox"/> Drawing(s)<br><input type="checkbox"/> Licensing-related Papers<br><input type="checkbox"/> Petition<br><input type="checkbox"/> Petition to Convert to a Provisional Application<br><input type="checkbox"/> Power of Attorney, Revocation, Change of Correspondence Address<br><input type="checkbox"/> Terminal Disclaimer<br><input type="checkbox"/> Request for Refund<br><input type="checkbox"/> CD, Number of CD(s): | <input type="checkbox"/> After Allowance Communication to a Technology Center (TC)<br><input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences<br><input type="checkbox"/> Appeal Communication to TC (Appeal Notice, Brief, Reply Brief)<br><input type="checkbox"/> Proprietary Information<br><input type="checkbox"/> Status Letter<br><input type="checkbox"/> Other Enclosure(s) (please identify below): |
| Remarks:<br><b>The Commissioner is hereby authorized to charge any additional or underpayment of fee(s) to Deposit Account No. 18-0580.</b>  |  |  |

| SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT |   |           |                |
|--|---|-----------|----------------|
| Firm or Individual Name (print/type)       | Dianne E. Reed, Reg. No. 31,292<br>Reed Intellectual Property Law Group | Telephone | (650) 330-0900 |
| Signature                                  |   | Date      | 10/21/04       |

| CERTIFICATE OF TRANSMISSION/MAILING   |           |      |          |
|---|-----------|------|----------|
| I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date shown below. |           |      |          |
| Name (print/type)   | Will Sayo |      |          |
| Signature   |           | Date | 10/22/04 |